

Arizona CTE Career Preparation Standards Framework for LABORATORY ASSISTING

This is a summary of changes made to the program framework dated January 2006. Workplace Standards 1 through 30; 32-34 will be addressed separately. Other changes to the original framework are outlined below:

- Standard 35.B has been renamed **Standard A**. The measurement criteria listed under the standard have been renumbered (1-3) with no additions and deletions.
- Standard 36.B has been renamed **Standard B**. The measurement criteria listed under the standard have been renumbered (1-5) with no additions and deletions.
- Standard 37.B has been renamed **Standard C**. The measurement criteria listed under the standard have been renumbered (1-7) with no additions and deletions.
- Standard 38.B has been renamed **Standard D**. The measurement criteria listed under the standard have been renumbered (1-10) with no additions and deletions.
- Standard 39.B has been renamed **Standard E**. The measurement criteria listed under the standard have been renumbered (1-12).

The words *the appropriate* have been deleted in measurement criteria 31.4.

The word *Accurately* has been replaced with *Report results* in measurement criteria 31.6.

- Standard 40.B has been renamed **Standard F**. The measurement criteria listed under the standard have been renumbered (1-6) with no additions and deletions.
- Standard 41.B has been renamed **Standard G**. The measurement criteria listed under the standard have been renumbered (1-5) with no additions and deletions.
- Standard 42.B has been renamed **Standard H**. The measurement criteria listed under the standard have been renumbered (1-2) with no additions and deletions.
- Standard 31 has been renamed **Standard I**. The measurement criteria listed under the standard have been renumbered (1-17).

The words *Properly cleanse* has been replaced with *Wash* in measurement criteria 31.4

The words *Select correct* and *gear* have been replaced with *Use personal* and *equipment* measurement criteria 31.6.

Measurement criteria 31.17 and 31.18 have been deleted.

- **Standard J** has been added with four (4) measurement criteria.
- **Standard K** has been added with three (3) measurement criteria.
- **Standard L** has been added with five (5) measurement criteria.
- **Standard M** has been added with four (4) measurement criteria.
- **Standard N** has been added with three (3) measurement criteria.
- **Standard O** has been added with five (5) measurement criteria.
- **Standard P** has been added with (6) measurement criteria.

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- **Standard Q** has been added with (14) measurement criteria.
- **Standard R** has been added with (7) measurement criteria.
- **Standard S** has been added with four (4) measurement criteria.
- **Standard T** has been added with four (4) measurement criteria.

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STANDARD A--ASSESS THE VARIETY OF CAREERS IN THE LABORATORY	
1	Examine the careers in the clinical laboratory environment
2	Explain required training and education, certification
3	Analyze the scope of responsibilities of each career
STANDARD B--MAINTAIN STANDARDS IN THE LABORATORY	
1	Apply the responsibilities and scope of practice of the laboratory assistant and other laboratory personnel
2	Relate the laboratory code of conduct to practices in the laboratory
3	Adhere to Clinical Laboratory Improvement Amendment (CLIA) regulations and their impact on laboratory functions and procedures
4	Demonstrate knowledge of Occupational Safety and Health Administration (OSHA) regulations and standard precautions as applied to the laboratory
5	Demonstrate safe use of laboratory equipment and materials
STANDARD C--DEMONSTRATE PROPER APPLICATION OF ASEPTIC TECHNIQUES IN THE LABORATORY	
1	Demonstrate knowledge of communicable disease and blood borne pathogens
2	Use sterilization and disinfection techniques
3	Select and use personal protective equipment in the laboratory
4	Use aseptic techniques for proper handwashing, gloving and disposal of supplies and disposable equipment in the laboratory
5	Demonstrate the procedure for disposal of biohazardous materials
6	Describe procedures for cleaning laboratory spills
7	Use safe and proper procedures for specimen collection, transport media, testing and storage of specimens
STANDARD D--CONDUCT THE PHLEBOTOMY PROCEDURE IN A LABORATORY SETTING	
1	Explain the legal scope of practice and laws and regulations related to laboratory personnel, phlebotomy and point of care testing

These technical knowledge and skill standards were validated by a Skill Standards Validation Committee on August 14, 2007, and used in the adaptation, adoption, and development of test items for pilot testing in Spring 2008.

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2	Read and use laboratory testing basic terms, abbreviations and codes
3	Read physician orders/laboratory requisitions to determine specimen requirements
4	Follow written facility testing procedures
5	Demonstrate the proper method of patient identification
6	Explain the process to the patient being sensitive to cultural and religious factors
7	Provide a comfortable and safe environment
8	Handle the phlebotomy equipment appropriately
9	Select the appropriate tube for the proper test
10	Demonstrate knowledge of the anatomy and physiology of the hand and arm
STANDARD E--APPLY PROCEDURES RELATED TO SELECTED SPECIMEN COLLECTION	
1	Demonstrate the proper method of patient identification
2	Demonstrate knowledge of basic physiology of the circulatory and urinary systems
3	Describe procedures for testing urine, blood, occult blood, and capillary glucose
4	Explain laboratory terms and reference values for selected specimens
5	Read physician orders/laboratory requisitions to determine specimen requirements
6	Follow written facility testing procedures
7	Choose equipment and supplies for selected specimens
8	Conduct selected specimens in a laboratory setting
9	Use protocol, label, transport, and store selected specimens
10	Report results per protocol using appropriate documentation
11	Identify results that are STAT

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12	Explain STAT reporting protocols
STANDARD F--ENSURE APPROPRIATE LABORATORY DOCUMENTATION AND QUALITY CONTROL	
1	Demonstrate knowledge of a variety of laboratory documents for reporting test results
2	Record results either manually or using a computer system
3	Notify specific laboratory personnel when warranted for patient condition, critical values, or difficulty with procedure
4	Explain quality control checks on instruments
5	Apply quality improvement techniques to laboratory activities as defined by the facility, department and profession
STANDARD G--MAINTAIN LABORATORY INVENTORY AND ENVIRONMENT	
1	Describe the proper storage of laboratory supplies and equipment
2	Check for adequate inventory of laboratory supplies and equipment
3	Receive and catalog incoming supplies
4	Use proper protocol for ordering needed laboratory supplies and equipment
5	Clean and maintain work areas and equipment
STANDARD H--DEMONSTRATE ACTIVITIES THAT REFLECT CURRENCY IN THE PRACTICE	
1	Use resources common in the field to stay current with advances in laboratory practice
2	Assess the benefits of active involvement in local, state, and national associations and organizations
STANDARD I--USE STANDARD PRECAUTIONS AND SAFETY MEASURES	
1	Demonstrate knowledge and use of standard precaution guidelines
2	Apply infection control standards
3	Demonstrate knowledge of isolation and use isolation procedures
4	Wash hands when performing procedures

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5	Put on and remove gloves according to standards
6	Use personal protective equipment (PPE)
7	Handle sterile and non-sterile items according to standards and procedures
8	Comply with hazardous labeling requirements and safety signs, symbols, and labels
9	Handle and dispose of contaminated and hazardous items according to standards and procedures
10	Use fire/chemical safety protocols
11	Adhere to the evacuation plan per protocol
12	Maintain a safe and clean work area
13	Use equipment according to manufacturer's guidelines
14	Employ quality measures when handling and maintaining equipment and materials
15	Report unsafe conditions for self and others
16	Demonstrate and use proper body mechanics and lifting techniques
STANDARD J--PROCESSING SPECIMENS	
1	Determine specimen acceptability <ul style="list-style-type: none">- patient preparation- type of specimen- collection- handling and storage of specimen- presence of interfering substances
2	Prepare for a test run <ul style="list-style-type: none">- sample and reagent preparation- use of standards and controls- instrument calibration- performance and maintenance checks- malfunction identification and troubleshooting
3	Perform analytical procedures recognizing method and instrument limitations <ul style="list-style-type: none">- prepare and verify manual and/or computer calculations- prepare and read data from a calibration curve- recognize appropriate linearity range and take appropriate action

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4	Perform quality control procedures - Westgard-Sheuhart rules - trends and shifts - moving averages - documentation and corrective action
STANDARD K--CONDUCT URINALYSIS	
1	Prepare for testing <ul style="list-style-type: none"> - instrument set-up, calibration, and maintenance - evaluate reagent/dipstick acceptability - specimen collection, handling, and storage - quality control procedures
2	Perform macroscopic examination of urine <ul style="list-style-type: none"> - physical and chemical tests - identify normal/abnormal values - recognize interfacing substances - confirm or correct using alternative methods - define method limitation(s)
3	Perform confirmatory tests
STANDARD L--APPLY PRINCIPLES OF HEMATOLOGY	
1	Determine specimen acceptability <ul style="list-style-type: none"> - collection, handling, and storage of specimen - evaluate type & age of specimen, additive, ratio of blood additive - proper labeling - check for clots
2	Prepare specimen for analysis <ul style="list-style-type: none"> - sample and reagents preparation - use of standards and controls - instrument calibration - performance and maintenance checks - malfunction identification and troubleshooting
3	Prepare acceptable blood films <ul style="list-style-type: none"> - peripheral (size/width thickness, feather edge straight and free of streaks, homogeneity, and la - bone marrow (coverslip preparation)
4	Properly stain blood films <ul style="list-style-type: none"> - Wright's stain - special stains (iron and controls, retic)
5	Perform erthrocyte sedimentation rates <ul style="list-style-type: none"> - Wintrobe, Westergren, or their modifications

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STANDARD M--APPLY PRINCIPLES OF COAGULATION AND HEMOSTASIS	
1	Determine specimen acceptability <ul style="list-style-type: none">- collection techniques- transport conditions- time, temperature, handling, and storage- additive present - blood to anticoagulant ratio, depending upon patient hematocrit- checking for clots or hemolysis
2	Prepare specimen for analysis <ul style="list-style-type: none">- centrifuge and maintain specimen acceptability relative to time, temperature, and pH
3	Prepare for a test run - sample and reagent preparation - use of standards and controls - instrument calibration - performance and maintenance checks - malfunction identification and troubleshooting
4	Perform bleeding time <ul style="list-style-type: none">- platelet count- patient information (drugs; ASA count)
STANDARD N--ISSUE BLOOD AND BLOOD PRODUCTS	
1	Maintain adequate supply of blood and blood products
2	Issue blood and blood products
3	Receive unused or returned blood components
STANDARD O--APPLY PRINCIPLES OF IMMUNOLOGY	
1	Determine specimen acceptability <ul style="list-style-type: none">- patient preparation- type of specimen- collection- handling and storage of specimen- presence of interfering substances
2	Prepare for a test run <ul style="list-style-type: none">- sample and reagent preparation- use of standards and controls- calibrate instruments or apparatus- perform maintenance checks- malfunction identification and troubleshooting

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3	Perform immunological assays
4	Interpret and report results <ul style="list-style-type: none">- identify questionable/contradictory results- correlate laboratory data with normal/abnormal physiological conditions/situations
5	Perform and evaluate quality control procedures related to each task and document corrective action
STANDARD P--APPLY PRINCIPLES OF MICROBIOLOGY	
1	Determine specimen acceptability <ul style="list-style-type: none">- patient preparation- type of specimen- collection- handling and storage of specimen- presence of interfering substances
2	Prepare smears and stains <ul style="list-style-type: none">- sample and reagent/stain preparation
3	Innoculate media <ul style="list-style-type: none">- sample and media preparation
4	Incubate media <ul style="list-style-type: none">- temperature requirements- prepare incubator- maintenance checks
5	Interpret and report results <ul style="list-style-type: none">- identify questionable/contradictory results- correlate laboratory data with normal/abnormal physiological conditions/situations
6	Perform and evaluate quality control procedures related to each task and document corrective action
STANDARD Q--MAINTAIN LABORATORY PRACTICE	
1	Follow safety procedures <ul style="list-style-type: none">- conform to guidelines for safety- report unsafe conditions
2	Comply with laws, regulations, and guidelines; federal, state, and local (CMS, CDC, OSHA, EEOC, CLIA, OPA, etc.)

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3	Comply with voluntary accrediting and inspection agency requirements (CAP, Joint Commission, AABB, etc.)
4	Communicate/coordinate laboratory services/needs to physician, institution, suppliers, and client - confirm results with health care team
5	Perform quality assessment and quality improvement activities
6	Utilize information management system - record and retrieve laboratory data from work produced on site and from reference laboratories
7	Prepare and label reagents
8	Store stock and working reagents properly
9	Operate and perform preventive maintenance on instruments and equipment - recognize equipment malfunctions and notify appropriate supervisory personnel
10	Calibrate and monitor instruments
11	Train new laboratory assistants - demonstrate technical laboratory skills to students and new employees
12	Communicate test results, reference ranges and specimen requirements to authorized sources
13	Recognize the existence of procedural and technical problems and take corrective action according to predetermined criteria
14	Report results
STANDARD R--COLLECT AND HANDLE SPECIMENS	
1	Identify and perform specimen collection procedures - venous blood - capillary blood - blood cultures - throat cultures, etc
2	Instruct patients/health care providers in the proper procedure for the collection of semen, urine, feces, and other body fluids
3	Evaluate acceptability of specimens
4	Perform processing and preanalytic preparation of specimens (centrifuge, separate, aliquot, and label, etc)

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5	Store specimens appropriately (time, temperature, light, packaging, and transport off-site, etc.)
6	Follow chain-of-custody procedures
7	Follow Standard Precaution and Body Substance Isolation
STANDARD S--PERFORM LEGAL AND ETHICAL BEHAVIORS	
1	Recognize liability associated with the practice of laboratory assisting - risk management - patient refusal, etc
2	Comply with American Medical Association (AMA) and American Hospital Association (AHA) Patients' Bill of Rights
3	Protect patient confidentiality and follow HIPAA guidelines
4	Function within the facility's scope of practice
STANDARD T--REPORTING TEST RESULTS	
1	Identify and analyze reference values
2	Correlate laboratory results with patient information
3	Identify questionable/contradictory results and correlate laboratory data with normal/abnormal physiological conditions/situations
4	Recognize abnormal results and refer them to designated supervisor personnel